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New Dirt on Legionnaires' Disease

This summer, the infectious diseases consult team at Virginia Mason Medical Center reported to Public Health the case of a previously-healthy 46 year-old woman hospitalized with pneumonia due to an uncommon strain, *L. longbeachae*. The team took a detailed history and discovered that the patient had been gardening extensively in the days preceding her illness onset. Because cases of legionellosis associated with potting soil use had been reported from Australia and Japan, Public Health obtained samples of the potting soil used by this patient, which subsequently tested positive for *L. longbeachae* at the Centers for Disease Control and Prevention.

L. longbeachae is an uncommon type of *Legionella* that causes a small proportion of legionellosis. Each year in King County there are one or two cases of infection reported due to *Legionella longbeachae.* This spring and summer the first 3 cases of Legionnaires' Disease associated with potting soil use in the U.S. were reported, including the case from King County (Legionnaires' Disease Associated With Potting Soil - California, Oregon, and Washington, May--June 2000. MMWR, Sept 1, 2000).

Legionnaires' Disease usually occurs in persons with underlying medical conditions, especially chronic lung disease, smokers, elderly persons, or in persons with weakened immune systems. Persons become ill 2-10 days after exposure to the bacteria. Symptoms include fever, muscle aches, headache, weakness, cough, shortness of breath and sometimes confusion and diarrhea. The infection does not spread from person-to-person. Although outbreaks of Legionnaires' Disease do occur, most cases are sporadic and the source of infection remains unknown. Legionellosis should be considered in all cases of severe community-acquired pneumonia. Culture, urine antigen testing, direct fluorescent antibody and special stains for *Legionella* are the diagnostic tests of choice.

Legionella bacteria are found widely in the environment, especially in water. The association between infection with *Legionella longbeachae* and potting soil was recognized in Australia in the 1980's. Potting soil appears to provide an environment in which *Legionella longbeachae* can grow. In studies from Australia, the bacteria have been found in potting soils from a variety of manufacturers, and there has been no link to a common potting soil in the U.S. cases.

The risk of acquiring Legionnaires' Disease from potting soil appears to be *extremely low* (less than being struck by lightning in King County). Persons using potting soil and who wish to take precautions that may reduce the very small potential risk of illness even further, may consider the following guidelines developed by health officials in Western Australia:

- open potting mix bags with care to avoid inhaling airborne particles of potting soil
- moisten the contents of the bag upon opening; make a small opening and insert a garden hose to dampen the potting soil
- wear gloves to avoid transferring potting soil from hand to mouth
- always wash hands after handling potting soil, even if gloves have been worn
- take the same precautions when handling soil, peat, mulch and garden composts

Additional investigations are needed to better understand the risk factors and conditions related to legionellosis associated with potting soil, including the potential role of environmental conditions such as heat and humidity, storage conditions, and particular behaviors associated with use of potting soil.

Acknowledgments: Thanks to RM Rakita, MD, K Olson, MD, NB Hampson, MD, Virginia Mason Medical Center.

Evaluation of HIV infection Reporting

In July 1999, the Washington State Board of Health (SBOH) approved revisions to Washington Administrative Code 246-100, mandating named reporting of asymptomatic HIV infection by providers and laboratories. Effective September 1, 1999, newly-diagnosed HIV infections and previously-diagnosed HIV infections, when the patient next sought care, were made reportable. The local health jurisdiction (LHJ) was also required to change names to codes within 90 days of the completion of the case investigation. This article was adapted from a SBOH-mandated report prepared by the Washington Department of Health (DOH) for the reporting period 9/1/99 to 7/31/00.

Performance of the HIV surveillance system
Part of the evaluation of HIV surveillance in Washington State concerned the ability of the system to meet standards set by CDC *(1)*:

- **Completeness of reporting:** Through a comparison with an independent database containing HIV cases eligible for reporting, it was determined that 61% of HIV cases which should have been reported had actually been reported. This fell short of the CDC standard of 85% or greater.
- **Timeliness:** 93% of HIV cases received were reported within 6 months of their HIV diagnosis date vs. the CDC minimum of 66%.

- **Duplicates:** 3% of reports were duplicate case reports vs. the CDC standard of 5% or less.
- **HIV risk:** 88% of cases were reported with information about HIV risk or exposure category vs. the CDC standard of at least 85%.

Therefore, in the first year of HIV reporting in Washington, the system met the majority of CDC standards. While the completeness of case reporting was lower than the standard, health department staff believe that this is a result of conducting the evaluation during the early months of implementation of the new system. Several evaluations of the completeness of AIDS case reporting in Washington over the past 10 years indicate 88-95% completeness of reporting. Similar results are expected with HIV surveillance once the system is fully implemented. It was concluded that the non-name coded identifier does not appear to be substantially hampering surveillance efforts and that the system adequately protects confidentiality.

Epidemiologic data for planning purposes

There were 1,032 HIV cases reported; 607 (59%) were Seattle-King County residents and 425 (41%) were from other counties. Fifteen percent were newly-diagnosed and 85% were cases that received care after the 9/1/99 implementation date but had been diagnosed prior to that date.

Recently-diagnosed (1998-2000) asymptomatic HIV cases were compared with AIDS cases diagnosed in the same time period. The HIV cases were more likely than the AIDS cases to be female and under age 30. Otherwise, the risk factor characteristics of the HIV cases were similar to those of AIDS cases; men who have sex with men and injection drug users accounted for the majority of cases in both groups. This confirms impressions about the increasing impact of the epidemic on women, and that HIV prevention plans developed in recent years (formulated based upon AIDS case data) are reasonable, at least for the current funding cycle for HIV prevention activities. As the HIV data become more complete, additional demographic and risk patterns may emerge and redirect prevention activities accordingly.

Impact of HIV surveillance on HIV testing among high-risk persons

Of concern is that fear about HIV reporting could deter persons at high risk from having an HIV test. However, the evaluation thus far provides no evidence that HIV reporting has adversely impacted HIV testing. Data from publicly-funded counseling and testing sites across Washington indicate that the number of HIV tests performed has gradually declined over the last 8 years, and that the positivity rate has remained relatively stable; this same trend is also noted for tests conducted in the first 11 months of HIV reporting. Data from these sites also indicate that the number of confidential tests remained relatively stable since HIV infection became reportable, while the number of anonymous tests performed decreased slightly. The demographic composition of the population tested at publicly-funded sites has remained stable: the majority of persons testing for HIV in Washington are male, white, and have a risk factor identified as "other" (a category that includes heterosexuals who have multiple sex partners). Anonymous HIV test sites continue to be available in all LHJs. Data from two high-volume private laboratories (responsible for over half of the HIV testing done by private labs) show that the total number of HIV tests they conducted increased during the 11-month evaluation reporting period and that positivity rate remained relatively stable.

A copy of the full report can be obtained from Dr. Sharon Hopkins at the HIV/AIDS Epidemiology Program at 206.296.4645.

(1) CDC. Guidelines for national HIV case surveillance including monitoring for HIV infection and AIDS. MMWR 1999;48(No.RR-13).

Disease Reporting (area code 206)
AIDS……296-4645
Communicable Disease…296-4774
STDs……..731-3954
Tuberculosis……731-4579
24-hr Report Line……296-4782

Hotlines:
CD Hotline……296-4949
HIV/STD Hotline……..205-STDS

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http://www.metrokc.gov/health

Reported Cases of Selected Diseases Seattle-King County 2000

	Cases Reported In September		Cases Reported Through September	
	2000	1999	2000	1999
AIDS	35	20	189	164
Campylobacteriosis	21	30	250	218
Cryptosporidiosis	1	NR	4	NR
Chlamydial infections	362	336	3423	2848
Enterohemorhaghic *E. coli* (non-O157)	1	NR	1	NR
***E. coli* O157: H7**	11	7	50	33
Giardiasis	25	29	176	150
Gonorrhea	107	84	825	683
***Haemophilus influenzae B* (cases <6 years of age)**	0	0	0	1
Hepatitis A	7	26	83	149
Hepatitis B	2	4	32	32
Hepatitis C/ non-A, non-B	3	1	9	6
Herpes, genital	44	57	594	500
Measles	0	0	2	1
Meningococcal Disease	0	1	11	18
Mumps	1	0	9	1
Pertussis	12	29	158	423
Rubella	0	0	1	2
Salmonellosis	24	16	175	227
Shigellosis	5	5	133	44
Syphilis, congenital	0	0	1	0
Syphilis, late	7	2	23	31
Syphilis	1	8	56	61
Tuberculosis	13	13	90	82

NR = Not reportable in 1999